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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/905,792	07/13/2001	Hao-Chih Chen	B-4238 618932-3	4932
36716	7590	10/03/2005	EXAMINER	
LADAS & PARRY 5670 WILSHIRE BOULEVARD, SUITE 2100 LOS ANGELES, CA 90036-5679			DI GRAZIO, JEANNE A	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/905,792

Applicant(s)

CHEN, HAO-CHIH

Examiner

Jeanne A. Di Grazio

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 June 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 12 and 13 is/are allowed.  
6) ☒ Claim(s) 1,2 and 7-11 is/are rejected.  
7) ☒ Claim(s) 3-6 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 02262002.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claims*

Claims 1-13 are pending. Claim 1 has been amended per Applicant's Amendment of June 13, 2005.

### *Priority*

Priority to TW-90100899 (Jan. 16, 2001) is claimed.

### *Allowable Subject Matter*

**Previously, per Final Office Action mailed May 21, 2004, claims 3 and 6 were indicated as objected to as follows.**

Claims 3 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 4 and 5 depend from claim 3 and are thus allowed as well.

Claims 12 and 13 are allowed.

As to claim 3, relevant prior art of record, alone or in combination, did not teach or suggest a backlight unit wherein a recess has an opening and a bottom, the protrusion has a top surface approaching the opening of the recess and a bottom surface approaching the bottom of the recess, and the area of the top surface is larger than the area of the bottom surface and when said limitations are considered in the context of said backlight unit as claimed.

Relevant art of record, Applicant's Admitted Prior Art (APA Figure 1B) teaches and discloses a conventional backlight unit for a liquid crystal display having the elements as claimed and noted below (Please see Claim 1 Rejections below).

However, APA Figure 1B and relevant art lack the elements of claim 3 as claimed.

As to claim 6, relevant prior art of record, alone or in combination, did not teach or suggest a backlight unit wherein the reflector further includes a base cover, an angle is formed between the first holder and the base cover, the angle is less than 90 degrees; as the light guide plate expands when heated, the light guide plate pushes the first holder and the first angle is increased to form a space, and the expanding portion of the light guide plate is received in the space and when said limitations are considered in the context of said backlight unit as claimed.

Relevant art of record, Applicant's Admitted Prior Art (APA Figure 1B) teaches and discloses a conventional backlight unit for a liquid crystal display having the elements as claimed and noted below (Please see Claim 1 Rejections below).

However, APA Figure 1B and relevant art lack the elements of claim 6 as claimed

As to claims 4 and 5 they are directly dependent upon objected to claim 3 with allowable subject matter above.

As to claim 12, claim 12 incorporates the noted allowable subject matter of claim 3. Claim 12 also includes other limitations in addition to those from claim 3 and is thus allowable for at least the reasons as previously noted with respect to claim 3.

As to claim 13, claim 13 incorporates the noted allowable subject matter of claim 6. Claim 13 is thus allowable for at least the reasons as previously noted with respect to claim 6.

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***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2 and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (APA)(Figure 1B) in view of United States Patent 6,046,785 (to Won).

Per claims 1 (amended) and 7-9, Figure 1B discloses a conventional backlight unit for a liquid crystal display and has a light guide plate (40) having a light receiving lateral side, a first coupling lateral side, and a second coupling lateral side, the first coupling lateral side having a first coupling member (42 and also 15) and the second coupling lateral side having a second coupling member (42 and also 15);

a reflector (30) disposed along the light receiving lateral side, said reflector having a reflective cover, an opening, a first holder (projection 32) and a second holder (not shown), the opening positioned toward the light receiving lateral side, the first holder (projection 32) extending toward the first coupling lateral side and the second holder extending toward the second coupling lateral side, the first holder having a first linking member (35), and the second holder having a second linking member (not shown); and

a light source (lamp 34) installed inside the reflector (30), the light emitted from the light source being reflected by the reflective cover and transmitted to the light guide plate,

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wherein the first and second coupling members (42 and also 15) are respectively combined with first and second linking members (35) for assembling the reflector and the light guide plate, and a predetermined distance is formed between the light source and the light guide plate (when the coupling and linking members are joined a predetermined distance must be formed between light source and light guide plate).

The unit further comprises a reflecting sheet (20) under the light guide plate and diffusing means (50), diffusing sheet (52), prism sheet (54), and protecting film (56).

Please also note that the light guide plate has a plurality of light emitting surfaces. Therefore, the limitation “wherein the first coupling lateral side and the second coupling lateral side are generally perpendicular to the light emitting surface” is met by a light emitting surface that is located on the side of the light guide plate. In that situation, the first and second coupling lateral sides would be perpendicular to the side of the light emitting surface.

APA Figure 1B does not appear to explicitly specify that the first and second coupling members are respectively directly combined with the first and second linking members.

Won teaches and discloses an attachment structure of a light guide to a frame that includes a lamp within the frame for a liquid crystal display device (Title, Abstract, entire patent). A light guide (100 in the Figures) has at least one groove (110) on a side of the light guide (100) that interconnects with a protrusion (310) on the frame (200). Groove (110) directly connects with the protrusion (310). Because the lamp is within the frame (200) the groove and protrusion directly connect with the lamp.

Won has this limitation to prevent cracking and breaking of light guide from frame (Column 2, Lines 1-5).

Won is evidence that ordinary workers in the field of liquid crystals would have found the reason, suggestion and motivation to directly combine coupling and linking members to prevent cracking and breaking of light guide from frame (Column 2, Lines 1-5).

Therefore, it would have been obvious to one of ordinary skill in the art of liquid crystals at the time the invention was made to modify APA Figure 1B in view of Won to prevent cracking and breaking of light guide from frame (Column 2, Lines 1-5).

Per claim 2: APA discloses the claimed invention except for that the first coupling member is a protrusion, the first linking member is a recess, and the protrusion is positioned in the recess when the first coupling member combines with the first linking member.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a first coupling member as a protrusion instead of a recess and the first linking member a recess instead of a protrusion, since it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. See MPEP 2144.04

As to claims 10 and 11, when the light source (lamp 34), the reflector (30), reflective cover, the first linking member (42, 15), the second linking member (42, 15), the first holder, and the second holder are all assembled, the conventional backlight unit for a liquid crystal display results in one combined, integral piece.

Claims 1, 2 and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (APA)(Figure 1B) in view of Japanese Patent Application 10-161114 (to Kubo et al.).

Per claims 1 (amended) and 7-9, Figure 1B discloses a conventional backlight unit for a liquid crystal display and has a light guide plate (40) having a light receiving lateral side, a first

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coupling lateral side, and a second coupling lateral side, the first coupling lateral side having a first coupling member (42 and also 15) and the second coupling lateral side having a second coupling member (42 and also 15);

a reflector (30) disposed along the light receiving lateral side, said reflector having a reflective cover, an opening, a first holder (projection 32) and a second holder (not shown), the opening positioned toward the light receiving lateral side, the first holder (projection 32) extending toward the first coupling lateral side and the second holder extending toward the second coupling lateral side, the first holder having a first linking member (35), and the second holder having a second linking member (not shown); and

a light source (lamp 34) installed inside the reflector (30), the light emitted from the light source being reflected by the reflective cover and transmitted to the light guide plate,

wherein the first and second coupling members (42 and also 15) are respectively combined with first and second linking members (35) for assembling the reflector and the light guide plate, and a predetermined distance is formed between the light source and the light guide plate (when the coupling and linking members are joined a predetermined must be formed between light source and light guide plate).

The unit further comprises a reflecting sheet (20) under the light guide plate and diffusing means (50), diffusing sheet (52), prism sheet (54), and protecting film (56).

Please also note that the light guide plate has a plurality of light emitting surfaces.

Therefore, the limitation “wherein the first coupling lateral side and the second coupling lateral side are generally perpendicular to the light emitting surface” is met by a light emitting surface



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that is located on the side of the light guide plate. In that situation, the first and second coupling lateral sides would be perpendicular to the side of the light emitting surface.

APA Figure 1B does not appear to explicitly specify that the first and second coupling members are respectively directly combined with the first and second linking members.

Kubo teaches and discloses a liquid crystal display device (Title, Abstract, entire application). Kubo provides a teaching that a light transmission plate and light source (surrounded by a reflector) are kept at a predetermined distance to prevent mechanical shock to the device (entire application).

Kubo is evidence that ordinary workers in the field of liquid crystals would have found the reason, suggestion and motivation to directly combine coupling and linking members to prevent mechanical shock to a device.

Therefore, it would have been obvious to one of ordinary skill in the art of liquid crystals at the time the invention was made to modify APA Figure 1B in view of Kubo to prevent mechanical shock to a liquid crystal display device.

Per claim 2: APA discloses the claimed invention except for that the first coupling member is a protrusion, the first linking member is a recess, and the protrusion is positioned in the recess when the first coupling member combines with the first linking member.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a first coupling member as a protrusion instead of a recess and the first linking member a recess instead of a protrusion, since it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. See MPEP 2144.04

As to claims 10 and 11, when the light source (lamp 34), the reflector (30), reflective cover, the first linking member (42, 15), the second linking member (42, 15), the first holder, and the second holder are all assembled, the conventional backlight unit for a liquid crystal display results in one combined, integral piece.

### *Response to Arguments*

Applicant's arguments filed June 13, 2005 have been fully considered but they are not persuasive.

The Examiner appreciates Applicant's arguments in Paper of June 13, 2005. However, the Examiner respectfully disagrees.

Regarding the Rejection of claims 1, 2 and 7-11 with Applicant's Admitted Prior Art (APA)(Figure 1B) in view of United States Patent 6,046,785 (to Won), it is respectfully pointed out that the Examiner offered the Won reference to show a direct connection between light guide plate and reflector with motivation for doing so. The motivation for a direct connection between a reflector and light guide plate, as noted, is to prevent cracking and breaking of light guide from frame (See Won at Column 2, Lines 1-5).

Regarding the Rejection of claims 1, 2 and 7-11 with Applicant's Admitted Prior Art (APA)(Figure 1B) in view of Japanese Patent Application 10-161114 (to Kubo et al.), it is respectfully noted that the Examiner offered Kubo, similar to the Won reference, to show a direct connection between light guide plate and reflector at a predetermined distance with motivation.

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The motivation for such a connection is to prevent mechanical shock to a liquid crystal display device.

As best understood by the Examiner, both references indicate reasons for directly connecting a light guide plate and reflector.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeanne A. Di Grazio whose telephone number is (571)272-2289.

The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jeanne Andrea Di Grazio  
Patent Examiner  
Art Unit 2871

JDG

  
ANDREW SCHECHTER  
PRIMARY EXAMINER